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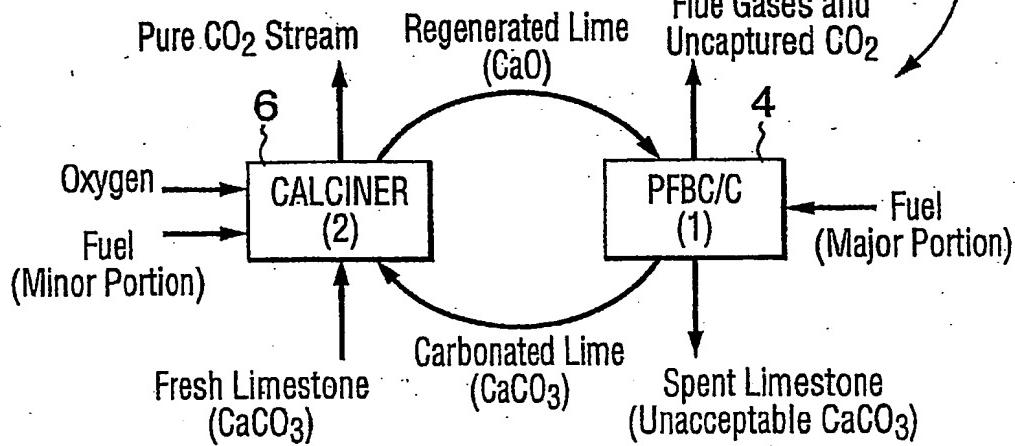
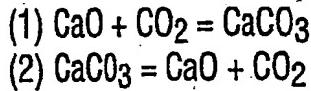
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[Continued on next page]

(54) Title: REACTIVATION OF LIME-BASED SORBENTS BY CO₂ SHOCKING



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(57) Abstract: The present invention discloses a method and an apparatus for reactivating lime-based sorbents and increasing the carbon dioxide-capture capacity of the sorbent in the combustion of carbon-containing fuels. The method of the present invention seeks to increase the carbon dioxide capture capacity of lime-based sorbents by applying concentrated or 100% carbon dioxide directly to a lime-based sorbent. Optionally, the lime-based sorbent may be pretreated using a hydration process after each process of carbon dioxide separation. The regenerated sorbent is carbonated in a presence of concentrated carbon dioxide and elevated temperatures. The invention is useful in reducing the need to add additional sorbent to maintain the carbonation/calcination cycle. The regenerative potential of the sorbent as manifested by the present invention leads to increased carbon dioxide-capture capacity of the sorbent.



ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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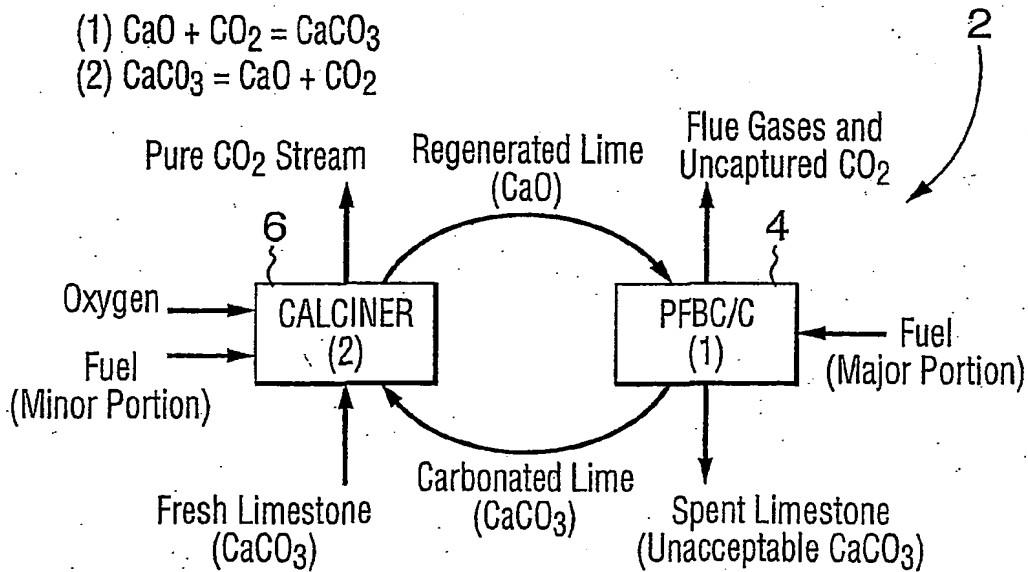
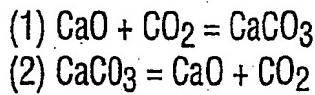
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